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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,159	09/12/2003	Cristian A. Lopez	020569-05801(P202-1294-US	8725

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EXAMINER

PEZZUTO, HELEN LEE

ART UNIT	PAPER NUMBER
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1713

MAIL DATE	DELIVERY MODE
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08/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/662,159

Applicant(s)

LOPEZ ET AL.

Examiner

Helen L. Pezzuto

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25,36-45,47 and 48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25,36-45,47 and 48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

Applicant's amendment to claim 37 filed on 5/27/07 are acknowledged. In light of applicant's amendment, previous 103 rejections of claims 37-43 over Unger et al. (US-082) or Ishii et al. (US-651) or Nakashita et al. (US-336) are hereby withdrawn. Currently, claims 1-25, 36-45, 47-48 are pending in this application.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-25, 36-45, and 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined disclosures of Vollmer et al. (US-747) and Heying (US-701) or Walker (US-816) or Alexander (US-940) for the reasons of record.

US 5,785,747 to Vollmer et al. discloses a viscosifying aqueous brine composition suitably used as wellbore treatment fluid in drilling operations, including

Art Unit: 1713

fluid loss control fluids (col. 1, lines 10-67). Prior art brine composition is taught to have enhanced rheological properties, especially at elevated temperatures and over extended periods of time (col. 5, line 13-17; col. 9, lines 1-21), which are closely associated with thermal stability/insulation properties. Prior art teaches glycols in terms of prehydrating alcohol and as an alcohol solvent (col. 6, lines 21-61), a water-soluble or water-dispersible polymer within the scope of the present viscosifying polymer (col. 6, line 62 to col. 7, line 27), crosslinking agent (col. 5, lines 25-30; col. 8, lines 50-61; col. 13, Example 10, Table 6), and other conventional additives. Prior art teaches the inclusion of other polymers having rheological and/or thixotropic characteristic similar to those of the viscosifying polymers disclosed (col. 7, lines 21-27).

US 6,581,701 to Heying discloses a method of reducing lost circulation in wellbores by incorporating a superabsorbent polymer in non-swollen state into an aqueous drilling fluid (abstract; col. 1, lines 19-31). Patentee prefers crosslinked polyamides as the water-absorbing polymer, but also teaches other suitable polymers, including starch-grafted polyacrylonitrile and crosslinked

Art Unit: 1713

acrylamide/sodium acrylate copolymers (col. 3, lines 4-67; col. 4, lines 46-64; col. 5, lines 49-55; col. 7, lines 10-28, line 66 to col. 8, line 17). The inclusion of other lost circulation materials such as starch or cellulose based materials and other polymers are also suggested (col. 5, lines 9-17). Similarly, US 4,664,816 to Walker discloses the use of an encapsulated water absorbent polymer as a drilling fluid additive for reducing lost circulation in wellbores (abstract; col. 4, lines 5-12). Prior art discloses various superabsorbent polymers as suitable additive, inclusive of those expressed in the present claims (col. 5, line 1-69). Still further, US 4,836,940 to Alexander, similarly discloses a method and a composition for controlling lost circulation of drilling fluid in wellbores, prior art method comprises introducing a palletized composition containing a water absorbing polymer and bentonite into a drilling fluid (see abstract; col. 5, lines 29-45). Suitable water absorbing polymers include those expressed in the present claims (col. 8, line 19 to col. 9, line 44).

Accordingly, in light of the clear teaching provided in US-701, US-816, and US-940, of using superabsorbent polymers as drilling fluid additive to control circulation

Art Unit: 1713

loss in wellbores during drilling operations. It would have been obvious to one having ordinary skill in the art to incorporate the superabsorbent polymers as taught into the closely analogous viscosifying aqueous brine composition of Vollmer et al., motivated by the reasonable expectation of enhanced reduction in lost circulation of drilling fluid in wellbores as taught. Once the combination is suggested, the determination of optimum or workable ranges of each component involves only routine skill in the art. Regarding the "thermal insulating" expressed in the preamble of the present claims, the examiner is of the position that the recited thermal insulating properties are inherent in prior art composition because identical components are present in the respective compositions. In any event, enhanced thermal stability of the resultant composition is expected as stable rheological properties are improved. Furthermore, superabsorbent polymers, which serve to bridge or fill the cracks or interstices in the circulation zone, are expected to provide thermal stability to the drilling environment.

Response to Arguments

3. Applicant's arguments and the accompanying 132 declaration filed on May 23, 2007 have been fully considered but they are not persuasive. Firstly, the examiner takes notice that the 132

Art Unit: 1713

Declaration is unsigned. The crux of applicant's argument lies in the contention that one having ordinary skill in the art would not have been motivated to combine the references of Vollmer and Heying, and Walker, and Alexander. The examiner disagrees and remains of the position that the prior art references are analogous in the drilling art. One having ordinary skill in the drilling art would recognize that controlling fluid loss and lost circulation control are analogous in the drilling art. Fluid loss control is an integral part of controlling lost circulation (i.e. the whole fluid). By controlling lost circulation, fluid loss is also controlled inherently. Vollmer teaches using viscosifying polymer-containing aqueous drilling fluid in drilling activities. Similarly, Heying, Walker, and Alexander teach using superabsorbent polymer-containing aqueous drilling fluid in drilling activities. Each prior art reference further teaches adding other analogous polymers to the drilling fluids for property enhancement. Heying, for example, suggests adding starch or cellulose based material as well as many other polymers into the making of the "soft gel" pill. One having ordinary skill in the art would have been motivated to incorporate a viscosifier (i.e. the fluid viscosifier in Vollmer) to further increase the viscosity of the gellable pill

Art Unit: 1713

or plug of Heying, Walker and Alexander, so as to produce a more efficient plug. Accordingly, the examiner's position is maintained.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

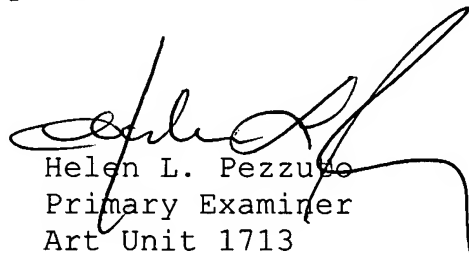
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen L. Pezzuto whose telephone number is (571) 272-1108. The examiner can normally be reached on 8 AM to 4 PM, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization

Art Unit: 1713

where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Helen L. Pezzullo
Primary Examiner
Art Unit 1713

hlp